

## REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Entry of the amendments is proper under 37 CFR §1.116, because the amendments place the application in condition for allowance and do not raise any new issue requiring further search. The amendments are necessary and were not earlier presented, because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

Claim 1 has been amended to limit the charge-transporting group X to be “a hole-transporting group consisting of a 1,9-bismethylanthracene group”; to limit the first bonding group A<sub>1</sub> in the linking group L to consist of “an oxygen atom”; to limit the second bonding group A<sub>2</sub> in the linking group L to consist of “an amide group”; and to limit the spacer group R<sub>1</sub> to consist of “an alkylene group”. Support for these amendments can be found on page 6, lines 3-9, page 25, line 7 and page 14, lines 4-15 of the specification.

Claim 10 has been added and it is similar to claim 1 but for the definitions of X and A<sub>1</sub>. Support for “X represents a charge-transporting group, which is an electron-transporting group consisting of a naphthalenediimide group or a phenyldiimide group” can be found on page 4, line 9 and page 12, lines 16-25 of the specification. Support for “A<sub>1</sub> is a first bonding group to be bonded to the charge-transporting group and consists of an N-propylpiperazine group” can be found on page 13, line 6 to page 14, line 10 of the specification.

### **I. Claim Rejection Under 35 U.S.C. § 103**

The Examiner rejects claim 1 under 35 U.S.C. §103(a) as being unpatentable over Li et al. (US 2004/0219387) in view of VanSlyke et al. (US 4,720,432) and Tashiro et al. (US 5,059,863). As applied to amended claim 1 and new claim 10, Applicant respectfully traverses the rejection.

Claim 1 is directed to an organic EL device comprising an organic layer of **a single-layer** sandwiched between a pair of electrodes, the organic layer containing an organic EL dye formed by linking a light-emitting group Y represented by the formula (Y-L)<sub>n</sub>X<sub>m</sub> to a charge-transporting group X. Amended claim 1 requires that “X represents a charge-transporting group, which is a hole-transporting group consisting of a **1,9-bismethylanthracene group**”; the light-emitting group Y consists of oxadiazolopyridine derivatives; the first bonding group A<sub>1</sub> in the

linking group L “**consists of an oxygen atom**”; the second bonding group **A<sub>2</sub>** in the linking group L “**consists of an amide group**”; and the spacer group **R<sub>1</sub>** “**consists of an alkylene group**”.

Li et al., Tashiro et al. and VanSlyke et al. do not disclose or suggest the combination of a charge-transporting group (X) as 1,9-bismethylanthracene group, a light-emitting group (Y) consisting of oxadiazolopyridine derivatives, and a linking group (A<sub>1</sub>-R<sub>1</sub>-A<sub>2</sub>), wherein “A<sub>1</sub> is a first bonding group to be bonded to the charge-transporting group and consists of an oxygen atom, A<sub>2</sub> is a second bonding group to be bonded to the light-emitting group and consists of an amide group, and R<sub>1</sub> is a spacer group linking the first bonding group with the second bonding group and consists of an alkylene group”, as recited in claim 1.

Furthermore, Li et al., Tashiro et al. and VanSlyke et al. do not disclose or suggest the combination of a charge-transporting group (X) that is an electron-transporting group consisting of a naphthalenediimide group or a phenyldiimide group, a light-emitting group (Y) consisting of oxadiazolopyridine derivatives, and a linking group (A<sub>1</sub>-R<sub>1</sub>-A<sub>2</sub>), wherein “A<sub>1</sub> is a first bonding group to be bonded to the charge-transporting group and consists of an N-propylpiperazine group, A<sub>2</sub> is a second bonding group to be bonded to the light-emitting group and consists of an amide group, and R<sub>1</sub> is a spacer group linking the first bonding group with the second bonding group and consists of an alkylene group”, as recited in claim 10.

Accordingly, the references do not disclose or suggest the organic EL device of claims 1 and 10.

Moreover, in Table 1 and Table 2 of the present specification, the **single-layer LED** of the present application initiated light emission at **a low voltage of 3-5 V**, and had **illuminance of 1000 cd/cm<sup>2</sup>** at an applied voltage of 9 V (see page 31, line 15 to page 33).

Li et al. disclose the possibility of a single-layer LED, but do not disclose an example of a single-layer LED.

Tashiro et al. only disclose the data of the illuminance of a multi-layer LED (see Tables 1, 2 and 3), and that the driving voltage is between 14-16 V.

VanSlyke et al. only disclose data of the illumination of a multilayered LED.

The claimed organic EL device comprising an organic layer of **a single-layer** sandwiched between a pair of electrodes unexpectedly initiated light emission at a low voltage of 3-5 V, and had illuminance of 1000 cd/cm<sup>2</sup> at an applied voltage of 9 V. These results are completely unexpected over the cited references.

Therefore, claim 1 would not have been obvious over Li et al. in view of VanSlyke et al. and Tashiro et al., and one of ordinary skill in the art would not have had any reasonable expectation of success of arriving at the claimed invention from the disclosures of the references.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

## **II. Conclusion**

For these reasons, Applicant takes the position that the presently claimed invention is clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that the rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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